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## SIPDIS

STATE FOR OES/PCI, OES/STC, OES/SAT, OES/IHB AND SCA/INS
STATE FOR STAS
STATE PASS TO NSF FOR INTERNATIONAL PROGRAMS
HHS PASS TO NIH
STATE PASS TO USAID
PASS TO HHS/OGHA (STEIGER/ABDOO/VALDEZ), CDC (BLOUNT/FARRELL),
NIH/FIC (GLASS/MAMPILLY/HANDLEY), FDA (LUMPKIN/WELSCH, GENEVA FOR
HOFMAN)
CHENNAI PLEASE PASS TO HYDERABAD
E.O. 12958: N/A
TAGS: TBIO SENV AMED KSCA ECON ETRD BEXP EINV TSPL KPAO
KWMN, SOCI, IN

SUBJECT: EYE INSTITUTE SEES FUTURE IN ADVANCED RESEARCH, EXPANSION, AND COLLABORATION

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11. Summary. Hyderabad-based L. V. Prasad Eye Institute (LVPEI) showcases a successful model for high-quality screening and treatment that benefits underserved populations of Andhra Pradesh. International and national collaborations on ground breaking vision research result in effective bench-to-bedside treatment solutions. In November, LVPEI researchers will visit the University of Pennsylvania to discuss gene therapy - providing an opportunity to positively highlight U.S./India science collaboration (see paragraph 7.) End Summary.

Not-for-Profit Vision Institute with a Comprehensive Plan to Combat Eye Diseases

- 12. A 2001 epidemiological study in the journal "Investigative Ophthalmology and Visual Science" reported that nearly 80 percent of blindness in India was preventable and curable. Accordingly, LVPEI's focus has been and continues to be availability of world-class treatment to all, regardless of ability to pay.
- 13. Founded by Dr. Gullapalli N Rao in 1986 and named after the Bollywood director who donated land for the institute, LVPEI is managed by two not-for-profit trusts, the Hyderabad Eye Institute and Hyderabad Eye Research Foundation. The institute encompasses six goals, namely: comprehensive patient care, clinical research, sight enhancement and rehabilitation, community eye health, education, and product development. LVPEI's quarterly report showed that between April June 2008, the institute provided service to an estimated 171,000 patients, of whom more than 55,000 nearly a third were treated at no cost. These numbers include just over 17,300 surgeries, with nearly 9100 being free. SciOffs saw an unending patient line wrapped nearly around the building on a weekday afternoon visit to the Hyderabad facility. The actual number of beneficiaries is likely much greater, as the quarterly report does not reflect all of LVPEI's outreach programs or the services provided by community care centers located in rural

villages.

- 14. The cost of screening and treatment is routinely less than a tenth of U.S. costs, but still out of reach for many. Patients are asked to pay what they can afford for treatment, according to LVPEI Director of Research D. Balasubramanian, who added this system works effectively. Thus a wealthy patron might pay an amount equivalent to U.S. treatment costs while others might pay half the Indian treatment cost, or even nothing.
- 15. While LVPEI's budget and operating expenses were not disclosed, the 2007 annual reports suggest the institute finds sufficient funding to cover all of its programs including treatment through a combination of this patient payment option system, government funding, donations, and research contracts. India's 11th Plan period includes funding of INR 12.5 billion (USD 260 million) for LVPEI initiatives including expansion of the Primary Care centers, developing a network of 30 eye banks and 130 eye donation centers, and additional research on glaucoma and diabetes-related blindness.

Treatment for All, Rural to Urban

- 16. LVPEI's network provides tiered stages of patient care to identify eye disease early on, and treat or escalate to the next level of care as appropriate. The first three levels of the system are primarily located in Andhra Pradesh, though Balasubramanian indicated that as funding increases the institute hopes to expand the network into other states.
- -- Community Eye Care. At the village level, volunteers conduct basic screening and work with the next level of care for referrals,

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monitor those who have had surgery, and provide ready-made near-vision glasses.

- -- Primary Care Center. Vision Technicians receive a year of training to conduct full vision screenings, provide prescriptions and low-cost glasses, and refer to the next level of care for surgeries and other conditions. Each Primary Care Center caters to about 50,000 people comprising about 20-25 villages.
- -- Secondary Care Center. Overseeing 10 Primary Care Centers, these centers can provide comprehensive outpatient services, surgical services, rehabilitation, and a full range of optical and pharmaceutical support. They also refer cases to next level of care as required.
- -- Tertiary Care Center. Spread across India, these hospitals and eye institutes work in affiliation with LVPEI to provide advanced care and rehabilitation, as well as training programs and clinical research.
- -- Center of Excellence. The LVPEI facility in Hyderabad is considered the peak of eye care in India. The institute also provides training for trainers and specialists, focuses on advanced research, has a strong advocacy and education program, and engages in clinical trials.

Collaborative Research Activities, Practical Application of Science

17. LVPEI has an extensive list of publications and conducts its own research in addition to being a premier site for clinical trials by international health agencies and companies. According to the research director and LVPEI's website, current collaborations include such prominent U.S. entities as NIH, Alcon, Allergan, Bausch & Lomb, i2 Foundation, and several universities. Research is funded by several Indian national agencies, international grants, and contracts. A full accounting of research activities can be found on the web at http://www.lvpei.org; post would like to highlight three

projects of particular interest.

- -- LVPEI researchers will be visiting in November University of Pennsylvania faculty Dr. Jean Bennett to discuss her research on using gene therapy to non-surgically treat childhood glaucoma. Dr. Bennett has had success with animal models and in a small group of human trials. Balasubramanian believes this treatment, which would be the first ever gene therapy in India, could be made both inexpensive and accessible.
- -- Using stem cells taken from the limbus of a patient's eye, or the eye of a near relative, LVPEI conducted clinical trials over the past two years to treat corneal injuries by either implanting healthy cells or in some cases by growing a new layer of cornea for transplant. Balasubramanian claimed their success rate is near 76 percent, and the continuing studies include attempts to grow a full cornea for transplant.
- -- In an effort to identify cross-cultural variations in expression of the genetic components of eye diseases, LVPEI's molecular genetics researchers have undertaken a study in conjunction with the U.S. NIH to compare eye disease in India with eye disease in the U.S. LVPEI expects the results to be useful in predictive genetic testing and early prevention or treatment.

Extensive Education and Training Programs

18. LVPEI's education center provides comprehensive in-depth training programs that cover eye care personnel at all levels -

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front office, counselors, ophthalmic nursing assistants, administrators, vision technicians, optometrists and ophthalmologists - and also encompass outreach to primary school children and the production of educational videos. The programs are both supported and attended by international eye care practitioners.

Comment

19. LVPEI is a model for improved patient care and international collaboration, despite its limited geographic focus in Andhra Pradesh. Indications are that it will continue its positive performance in both patient care and research. Funding does not appear to be an issue at this time. The institute has an established relationship with HHS through NIH, but is eager for more collaboration with U.S. researchers and industry to advance eye disease treatment capabilities. This is a good news story for both the Indian medical system and U.S./Indian scientific collaboration. End Comment.

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